STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene
201 W. Preston Street, Baltimore, Maryland 21201

Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – John M. Colmers, Secretary

Office of Preparedness & Response
Sherry Adams, R.N., C.P.M, Director
Isaac P. Ajit, M.D., M.P.H., Deputy Director

June 18, 2010

Public Health & Emergency Preparedness Bulletin: # 2010:23
Reporting for the week ending 06/12/10 (MMWR Week #23)

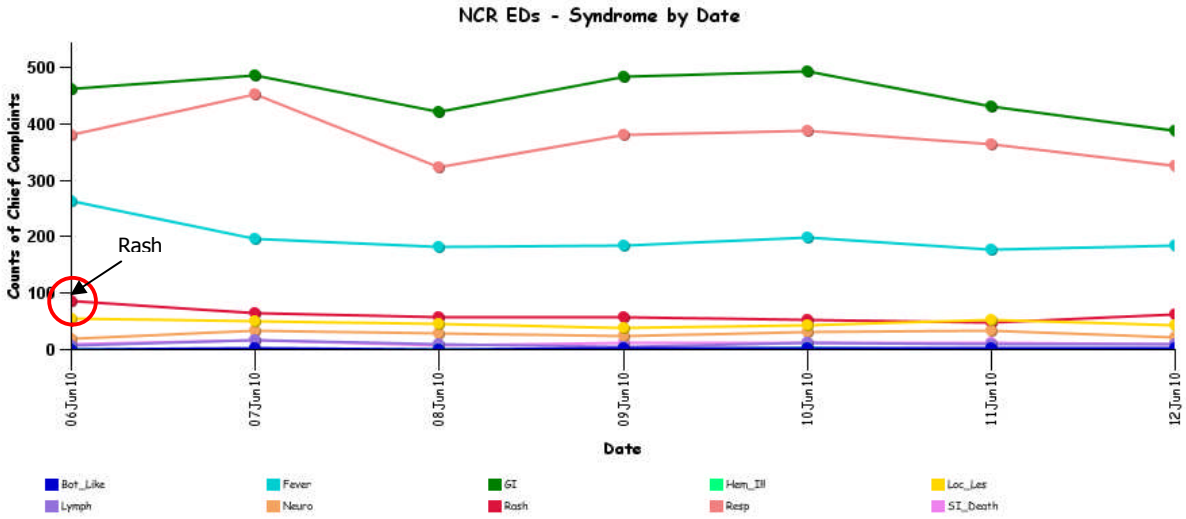
CURRENT HOMELAND SECURITY THREAT LEVELS

National: **Yellow (ELEVATED) *The threat level in the airline sector is Orange (HIGH)**
Maryland: **Yellow (ELEVATED)**

SYNDROMIC SURVEILLANCE REPORTS

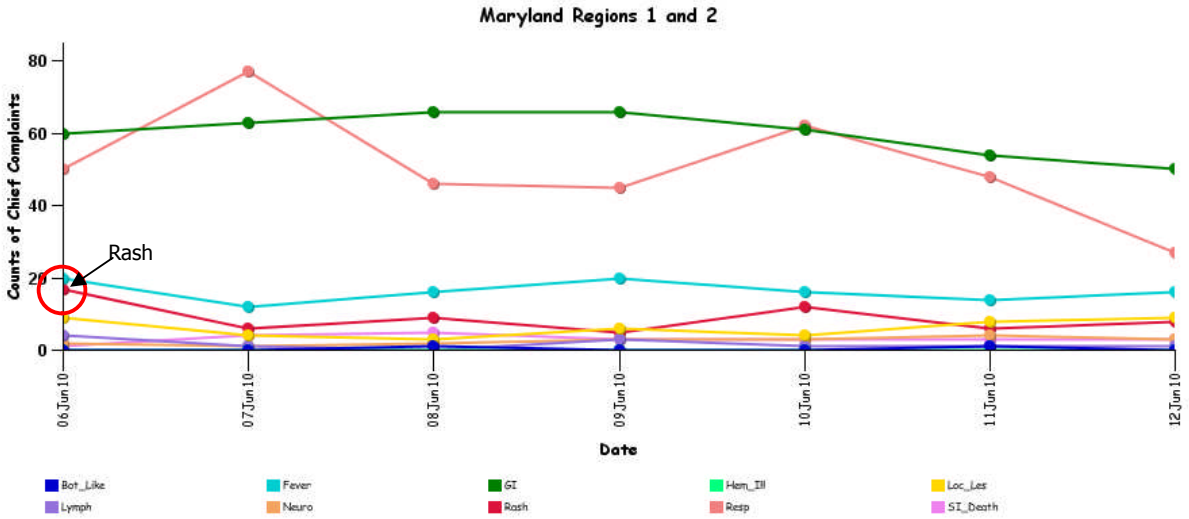
ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR Spring 2006 (v 1.3) now uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

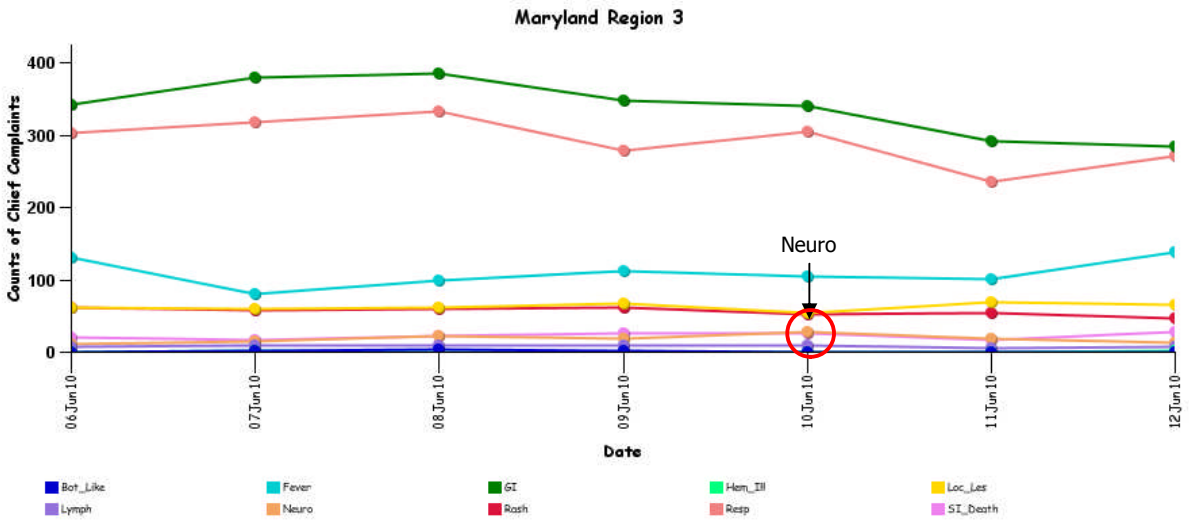


* Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

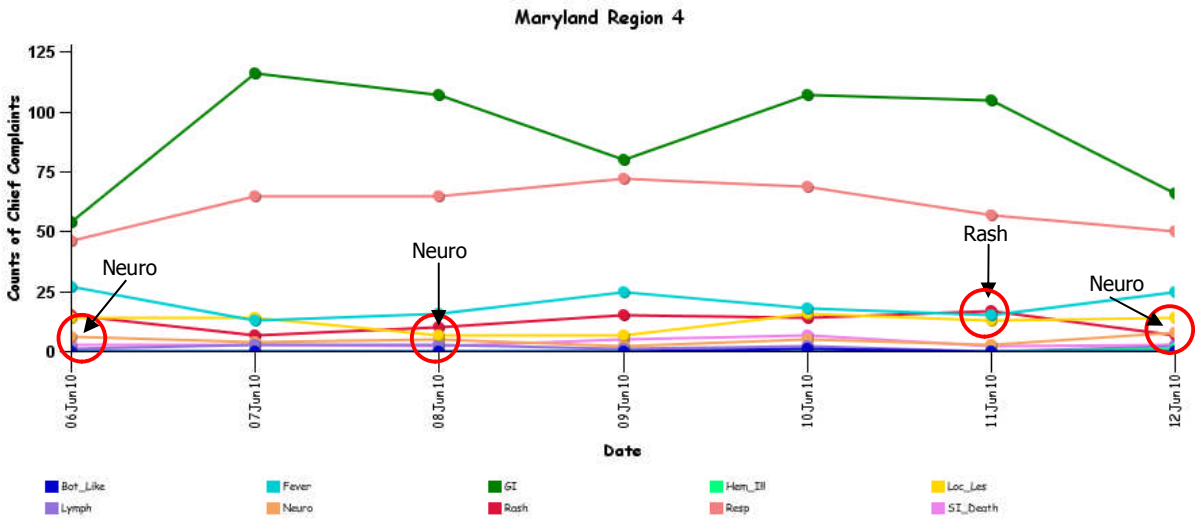
MARYLAND ESSENCE:



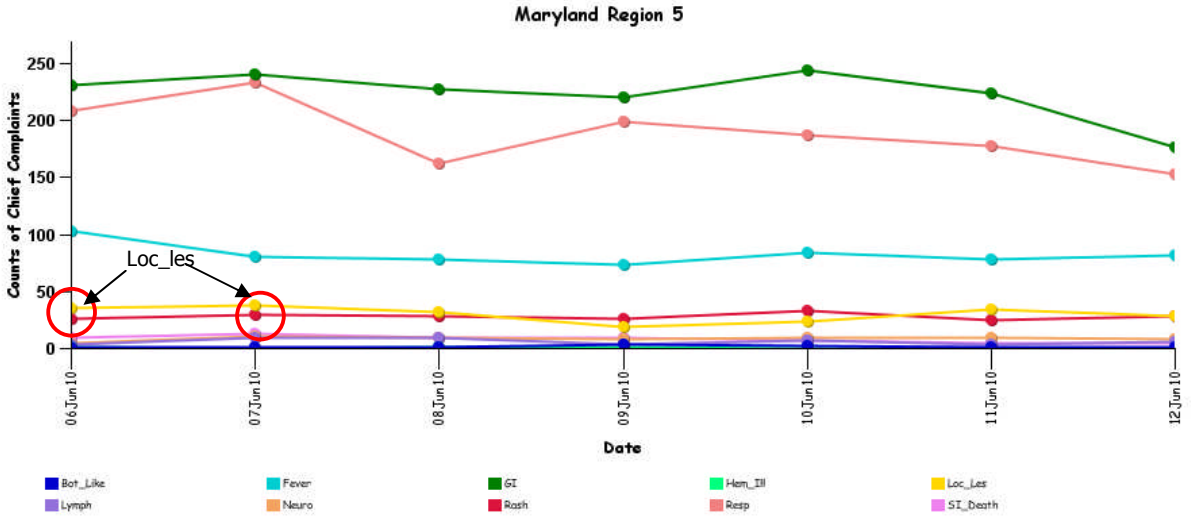
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore city, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE

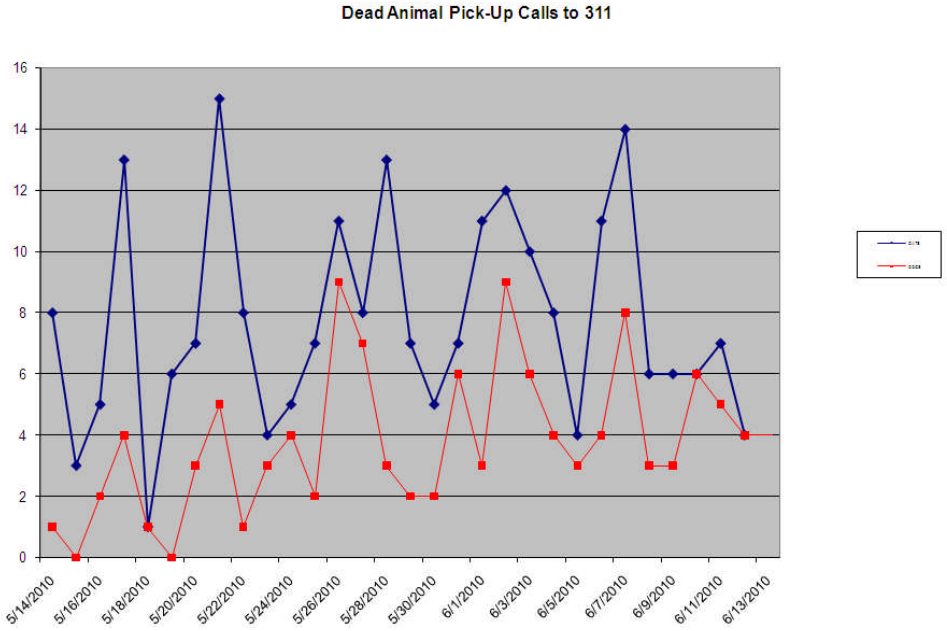


* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE



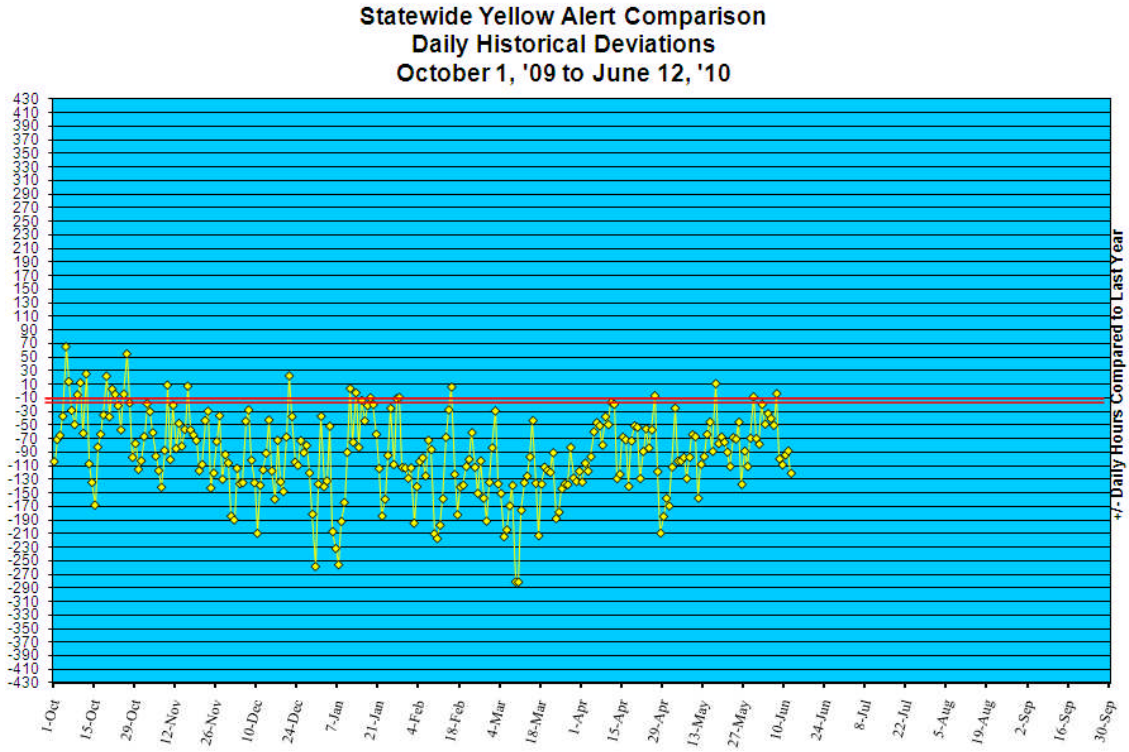
* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

BALTIMORE CITY SYNDROMIC SURVEILLANCE PROJECT: No suspicious patterns in the medic calls, ED Syndromic Surveillance and the animal carcass surveillance. Graphical representation is provided for animal carcass surveillance 311 data.



REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/09.



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in May 2010 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	**Aseptic**	**Meningococcal**
New cases (June 06 - June 12, 2010):	15	0
Prior week (May 30 - June 05, 2010):	5	0
Week#23, 2009 (June 07 - June 13, 2010):	12	0

2 outbreaks were reported to DHMH during MMWR Week 23 (June 6-12, 2010)

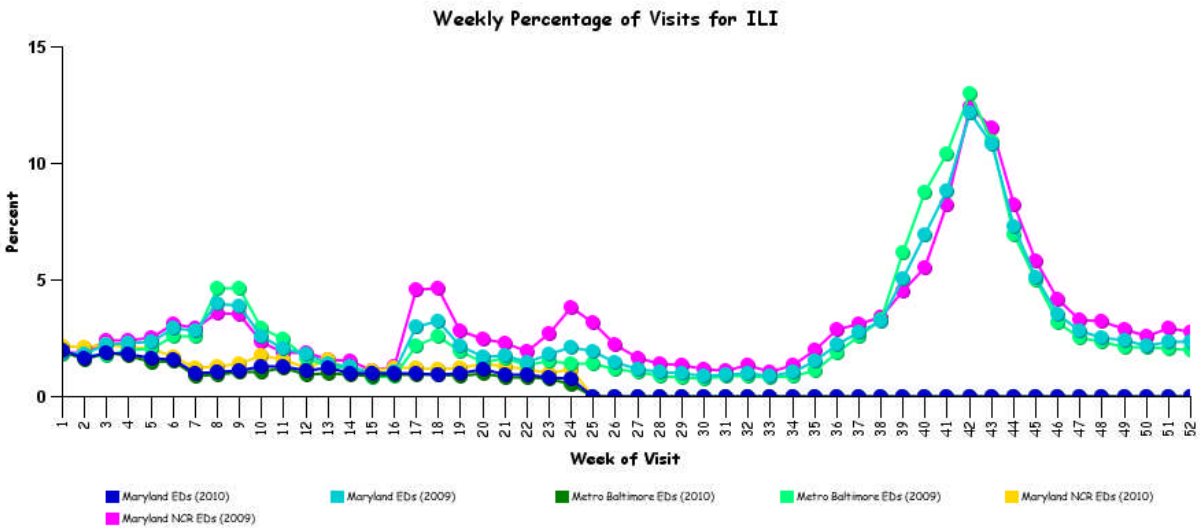
1 Gastroenteritis outbreak
1 outbreak of GASTROENTERITIS in an Institution

1 Respiratory illness outbreak
1 outbreak of PNEUMONIA/ILI in a Nursing Home

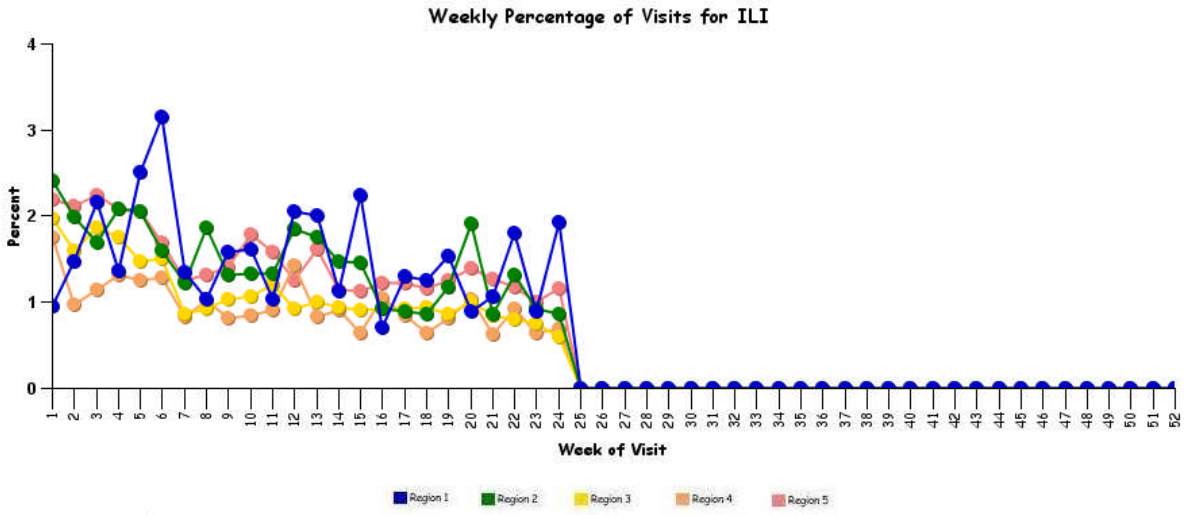
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the
week.



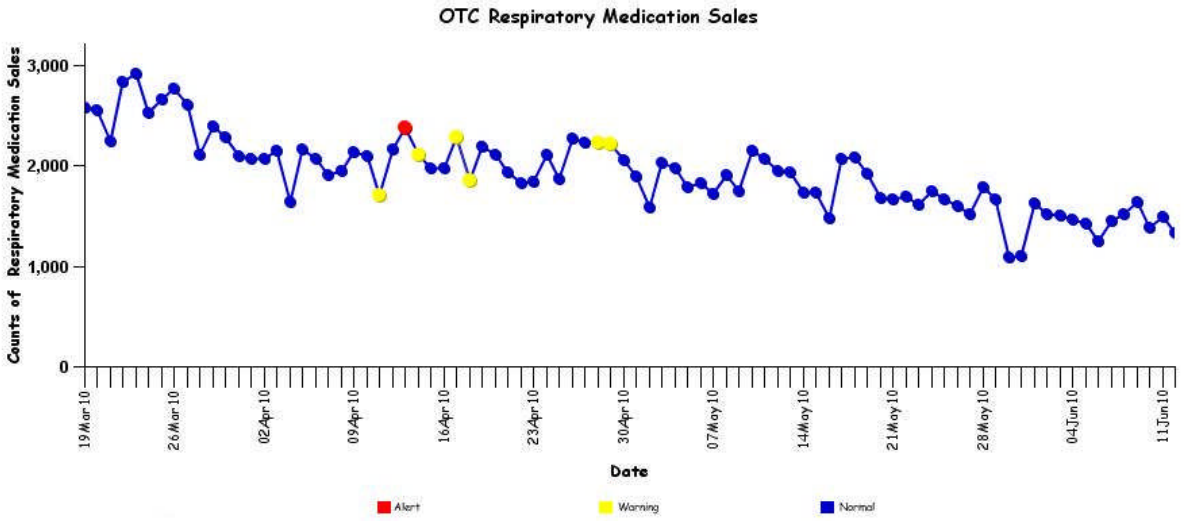
* Includes 2009 and 2010 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2010 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PANDEMIC INFLUENZA UPDATE:

WHO Pandemic Influenza Phase: Phase 6: Characterized by community level outbreaks in at least one other country in a different WHO region in addition to the criteria defined in Phase 5. Designation of this phase will indicate that a global pandemic is under way. Definition of Phase 5 is characterized by human-to-human spread of the virus into at least two countries in one WHO region. While most countries will not be affected at this stage, the declaration of Phase 5 is a strong signal that a pandemic is imminent and that the time to finalize the organization, communication, and implementation of the planned mitigation measures is short.

US Pandemic Influenza Stage: Stage 0: New domestic animal outbreak in at-risk country

**More information regarding WHO Pandemic Influenza Phase and US Pandemic Influenza Stage can be found at: http://bioterrorism.dhmh.state.md.us/Documents/Plans/PandemicInfluenzaResponseAnnex(Version7.3).pdf

AVIAN INFLUENZA-RELATED REPORTS:

WHO update: As of June 08, 2010, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 499, of which 295 have been fatal. Thus, the case fatality rate for human H5N1 is about 59%.

AVIAN INFLUENZA, HUMAN, FATAL (CHINA): 8 Jun 2010, The Ministry of Health in China has announced a new confirmed human case of [avian influenza] H5N1 [virus] infection. The patient is a 22-year-old pregnant female from Hubei Province. She had onset of symptoms on 23 May 2010 and died on 3 Jun 2010. Investigations into the source of her infection indicate exposure to sick and dead poultry. Close contacts of the patient are being monitored and to date all remain well. Of the 39 cases confirmed to date in China, 26 have been fatal.

H1N1 INFLUENZA (Swine Flu):

INFLUENZA PANDEMIC, WORLD HEALTH ORGANIZATION UPDATE (H1N1): 12 June 2010, Worldwide more than 214 countries and overseas territories or communities have reported laboratory confirmed cases of pandemic influenza H1N1 2009, including more than 18 156 deaths. The WHO is actively monitoring the progress of the pandemic through frequent consultations with the WHO Regional Offices and Member States and through monitoring of multiple sources of information.

Active but declining transmission of pandemic influenza virus persists in limited areas of the tropics, particularly in Southeast Asia and the Caribbean. As countries of the temperate southern hemisphere enter winter, only sporadic influenza activity has been detected so far, except in Chile and Uruguay, both of which have recently reported small numbers of pandemic influenza virus detections. Although seasonal influenza B viruses have been the predominant type of influenza virus circulating worldwide since the end of February 2010, there have been increasing but low level detections of seasonal influenza H3N2 viruses, particularly in South America and in East Africa. In the tropics of the Americas, overall pandemic influenza activity is low, however, both seasonal influenza H3N2 and type B viruses are actively circulating in parts of tropical South America. Active but declining transmission of pandemic influenza virus continues to be detected primarily in Cuba. Since early 2010, pandemic influenza virus has circulated at low levels in Costa Rica. Sporadic detections of pandemic influenza virus continue to be reported in Brazil. During the most recent reporting week (last week of May 2010), both Brazil and Venezuela reported regional spread of influenza activity associated with an increasing trend of respiratory diseases. In Venezuela, recent influenza activity (which began during early May 2010) has been predominantly due to circulating seasonal influenza A viruses. In Bolivia, circulation of seasonal influenza viruses, predominantly type B, was observed between March and May 2010 and now appears to be subsiding.

In Asia overall pandemic influenza virus transmission remains low, except in parts of tropical South and Southeast Asia, particularly Singapore, Malaysia, and Bangladesh. In Singapore, overall levels of ARI remained slightly below the epidemic threshold and the proportion of respiratory samples testing positive for pandemic influenza virus increased slightly to 34 percent. In Malaysia, limited data suggests that pandemic influenza virus transmission has begun to decline since plateauing during May 2010. In Bangladesh, there has been stable persistent low level co-circulation of pandemic and seasonal influenza B viruses since March 2010. Sporadic detections of pandemic influenza virus continued to be reported across other parts of Asia. In East Asia, overall influenza activity remains low, however, seasonal influenza B viruses continue to circulate at low and declining levels.

In Sub-Saharan Africa, pandemic influenza virus continued to circulate at low levels in parts of West Africa, most notably in Ghana. During the most recent reporting week, 13 percent of all respiratory samples tested positive for pandemic influenza virus in Ghana. Small but significant numbers of seasonal H3N2 viruses have been detected in Kenya and Tanzania since late May 2010.

Overall, in the temperate regions of the northern hemisphere, pandemic influenza viruses have been detected only sporadically during the past month. In the temperate southern hemisphere, only 2 countries, Chile and Uruguay, have recently reported small numbers of pandemic influenza virus detections. In Chile, there was low level geographically limited circulation of pandemic influenza virus during May 2010; 3.4 percent of respiratory samples tested positive for pandemic influenza virus during the last week of May 2010. Of note, in Uruguay, 11 (44 percent) of 25 samples tested positive for pandemic influenza during the most

recent reporting week (the last week of May 2010); however, the corresponding intensity of respiratory diseases in the population is not yet known.

Other respiratory viruses, most notably RSV, are known to be circulating in Chile and Argentina. There have been no recent detections of pandemic influenza virus in South Africa. In New Zealand and Australia, overall levels of ILI remain low; only sporadic detections of seasonal and pandemic influenza viruses have been recently reported in Australia.

INFLUENZA PANDEMIC, OSELTAMIVIR RESISTANCE (H1N1): 07 June 2010, Researchers reported on Thursday [3 Jun 2010] that 2 extra mutations set the stage for the seasonal influenza virus to evolve into a form that now resists 3 of the 4 drugs designed to fight it. Their study, published in the journal Science, provides a way for scientists to keep an eye out for dangerous mutations in new flu viruses, including the ongoing pandemic of H1N1 swine flu [influenza pandemic (H1N1) virus infection]. Only 4 drugs are on the market to treat flu and 2, the adamantines, are useless against virtually all circulating strains because the viruses have evolved resistance. Tamiflu, known generically as oseltamivir, is the current drug of choice. It comes as a pill. An inhaled drug that works in a similar manner is called Relenza, or zanamivir generically. Both can help reduce flu symptoms if taken quickly and can keep the most vulnerable patients out of the hospital, or keep them alive if they are severely ill. But 2 years ago the common circulating strain of seasonal H1N1 developed resistance to Tamiflu. Doctors were surprised, because the mutation that help the virus evade the effects of Tamiflu also usually made it a weak virus that did not infect or spread well. "People have known about this H274Y mutation [in the neuraminidase protein] for over a decade, but the mutation seemed to interfere with the virus's ability to replicate and be transmitted," Jesse Bloom of the California Institute of Technology [Caltech], who led the study, said in a statement. "Something happened to make the Tamiflu-resistant virus also capable of replicating and spreading like wild-type flu viruses." Bloom and Dr David Baltimore, an expert on AIDS and on the genetic functions of cells and viruses at Caltech, led a study to find out how this happened. They found that 2 other mutations in the virus allowed it not only to evade the effects of Tamiflu but also to survive and spread. In addition, the mutations took place before the 3rd and final mutation allowing the virus to evade the drugs. This means that scientists can monitor flu viruses for the initial 2 mutations to give early warning that they are about to become drug resistant. This is important in planning for both seasonal influenza and pandemics. Seasonal flu kills between 250 000 and 500 000 people every year globally. H1N1 'swine' flu [influenza pandemic (H1N1) virus infection] may have been just slightly more deadly -- statistics will take years to gather -- but it affects younger adults and children in contrast to seasonal flu, which kills more elderly people. Currently 'swine flu' is easily treated by Tamiflu but that could change at any time. So doctors need drugs on hand to save lives and if one drug will be useless, they need to know that because flu must be treated within days of onset for treatment to be useful. Earlier on Thursday [3 Jun 2010] the World Health Organization said the H1N1 pandemic was not yet over although its most intense activity has passed in many parts of the world.

Resources:

http://www.cdc.gov/h1n1flu/

http://www.dhmh.maryland.gov/swineflu/

NATIONAL DISEASE REPORTS

SALMONELLOSIS, SEROTYPE HVITTINGFOSS, RESTAURANTS (ILLINOIS): 12 June 2010, An Illinois health spokesperson told The Packer [newspaper] today that fresh produce was the likely culprit sickening at least 71 people with _Salmonella_ who ate at Subway Restaurants in 22 different counties. As of this morning, there were 71 confirmed cases of _Salmonella_ serotype Hvittingfoss affecting people from 2 to 88 years old. Melaney Arnold, communications manager for the Illinois Department of Public Health told The Packer 26 people have been hospitalized, and 7 were still in the hospital as of today. Subway restaurants in 22 Illinois counties removed lettuce, green peppers, red onions and tomatoes from restaurants during the period in which people who got sick reported eating at a Subway -- 11 May to 25 May 2010, according to the department -- and replaced them with new product, according to a Subway news release. (Food Safety Threats are listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

E. COLI O157, UNPASTEURIZED MILK (MINNESOTA): 07 June 2010, The total number of people who have become sick after drinking raw milk from a farm near Gibbon, Minnesota, has risen to 5. The most recent case of _E. coli_ [O157:H7] affected a school-aged child who was not hospitalized. The 1st 4 cases involved 2 toddlers, another school-aged child, and a man in his 70s. Each of the 1st 4 were hospitalized and have been released. This specific strain has not appeared in Minnesota before, according to State Department of Health officials. It has been linked to animals and raw milk produced on the Hartman Dairy Farm near Gibbon. Raw milk is milk that has not been pasteurized. _E. coli_ also has been found in cheese from the farm, and 8 samples from 3 different animals have tested positive for the same _E. coli_ strain that was found in each of the sick individuals. The State Department of Health has placed an order on the farm preventing the movement of the farms products, but officials still fear more cases could arise because it sometimes takes up to 2 weeks for symptoms to become apparent. Owners from the Hartmann Dairy Farm are not talking to the media, but they did release a statement through their lawyer, saying that the Hartmann family has taken "great care for more than 15 years to provide wholesome and nutritious products to private individuals who choose to consume the farm's natural foods, produced without dependence upon pesticides, herbicides, antibiotic, or genetically modified grains." (Food Safety Threats are listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

CRIMEAN-CONGO HAEMORRHAGIC FEVER (KAZAKHSTAN): 12 June 2010, Medical workers in [southern Kazakhstan's] Kyzylorda Region have confirmed the diagnosis of Crimean-Congo hemorrhagic fever (CCHF) in a 12-year-old child, the press service of the Kazakh Ministry of Emergency Situations has said. According to the source, at 2230 [local time, 1630 GMT] on 7 Jun 2010, a 12 year-old boy was admitted to the Zhanakorgan district hospital for infectious diseases near the Akkum station in Kyzylorda Region on suspicion of having contracted CCHF. Medical workers confirmed the diagnosis at 1830 on 8 Jun [2010]. The patient's condition remains serious. (Viral Hemorrhagic Fever is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

CRIMEAN-CONGO HAEMORRHAGIC FEVER (KOSOVO): 11 Jun 2010, A patient suffering from Crimean Congo hemorrhagic fever died Tuesday evening [8 Jun 2010] at the infectious disease clinic in Pristina hospital, the 4th person in Kosovo to succumb to the disease this year [2010]. The patient, aged 50, was from the Gjakova municipality. The clinic has registered some 357 patients this year [2010] who complained of tick bites, but only 72 of them required further treatment in hospital. Crimean Congo hemorrhagic fever, CCHF, is a tick-borne disease. "The patients come from a region in Kosovo where there is evidence of the hemorrhagic fever," Prof Dr Shemsedin Dreshaj, the director of the infectious disease clinic, told Balkan Insight. He added that for the past 15 years an area that covers 4 municipalities has been the region where the highest number of infected people has been found. In 2009, 13 persons were confirmed to be infected with CCHF virus, of whom 2 persons died. Explaining the situation in 2010, Dreshaj said: "75 patients either had clinical signs or were bitten by a tick from the endemic region." The affected region covers Suhareke municipality, Podrime region, Malisevo municipality, and reaches to Istog municipality. Dreshaj confirmed that there are no patients currently in danger. On a daily basis the infectious disease clinic receives individuals complaining of tick bites but after treatment they are discharged from hospital. "There are ticks that are not infected [with the virus], therefore people are not kept in hospital," Dreshaj stressed. The youngest victim to succumb to the disease this year was an 11-year-old boy from Malisevo municipality who passed away on 21 May 2010. Dreshaj said that the Ministry of Agriculture and Ministry of Health had conducted decontamination activities in the affected areas. "Disinfection starts in early spring but this does not eliminate all infected ticks," Dreshaj explained. He added that ticks lay the eggs 50 to 70 centimeters [20-28 in] under the ground, making it difficult to eliminate the disease. "This makes the process a bit difficult." (Viral Hemorrhagic Fever is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

Anthrax, Human, Livestock (India): 11 June 2010, The total number of anthrax cases in humans in Orissa's Koraput district since last month [May 2010] has risen to 18 with health officials on Wednesday [9 Jun 2010] confirming 5 more victims in the region. "The latest infections have been detected in Semiliguda block," additional district medical officer Nabaghana Chaudhuri said over the phone. The disease has attacked 3 people of Biliguda village and one each at Parajakhandi and Bariguda villages. All of them developed the illness [2 Jun 2010], he said. Last month [May 2010], at least 13 people of 2 villages under neighboring Dasmantpur block were treated after they were found to have the infection. "All these people got the anthrax virus after eating rotten meat," he said. "Those affected, including the latest 5 persons, are out of danger. Medical teams are camping in the affected villages to prevent spread of the disease," he said. Koraput district, about 500 km [311 mi] from the state capital Bhubaneswar, is not new to anthrax, a bacterial disease that mostly affects animals and spreads to humans through consumption of contaminated meat. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, SWINE (RYBNITSA) 10 Jun 2010, The veterinary services of Rybnitsa rayon [district] announced quarantine in a village farm because of suspected swine anthrax cases. The veterinarians have informed that the definitive diagnosis is pending. This region was free of anthrax for a long time. A vaccine campaign is planned to be implemented once the diagnosis of anthrax is confirmed. The veterinarians urge the population to comply with the possible vaccine program procedures. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, HUMAN, BOVINE, PORCINE SUSPECTED (PHILIPPINES): 07 June 2010, Health officials warned of a possible anthrax epidemic after more than 40 cases of infections related to the disease were reported in 2 different places in northern Luzon in the past few weeks. In Bangued, Abra, according to the town officials, 38 people were hospitalized and confined since 8 May 2010 after being infected with anthrax. According to reports, residents acquired the virus [sic] after eating 2 infected carabaos in the town of Villaviciosa. No deaths were reported due to timely aid given to the infected individuals by health sectors. However, provincial veterinarian Diosdado Taverner said the Villaviciosa cases were isolated, and the spread of the [pathogen] was in control. Taverner also led a group of officials from the Department of Health to investigate further the cases. Taverner warned the public from eating livestock from the area at the moment, because of the high risk of acquiring the virus from local animals. To stop spread of the disease, the provincial officials started vaccinating livestock in the area. Head of the Animal Services of the Livestock division of the Department of Agriculture Dr. Arlene Sagayo visited the area and further investigated the condition of the livestock in Bangued to help prevent possible outbreaks in the area. In the northern part of Ilocos, another suspected case of anthrax was reported after livestock, including carabaos and pigs, started dying in the area. However, officials have yet to confirm the cause of death but still put the possibility of anthrax as top priority in their investigation. The Center for Health Development in the Cordillera warned the people to avoid eating local livestock until further proof of the virus is studied well. Meanwhile, Dr. Amelita Pangilinan of the regional DOH based in Baguio said the Abra cases were "suspected" as anthrax from symptoms exhibited by the victims. Pangilinan said if the animal is already dead, it should not be eaten, because the animal might have had an illness before it died. Anthrax is caused by _Bacillus anthacis_ bacteria found in animals like carabaos and cows. It can be transmitted through the eating of meat. It is an airborne disease, and even going near or holding the infected animal may cause the infection. It can also kill when not immediately prevented and cured. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/

Maryland's Resident Influenza Tracking System: www.tinyurl.com/flu-enroll

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NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

Sadia Aslam, MPH
Epidemiologist
Office of Preparedness and Response
Maryland Department of Health & Mental Hygiene
300 W. Preston Street, Suite 202
Baltimore, MD 21201
Office: 410-767-2074
Fax: 410-333-5000
Email: SAslam@dhmh.state.md.us